

REPLY TO:
BOX 219
BRISTOL, PA. 19007
(215) 768-5501

Received JUN - 5 1969

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June 2, 1969

Water Treatment

Mr. John P. Durr
Regional Sanitary Engineer
Department of Health
Commonwealth of Penna.
401 Buttonwood Street
West Reading, Pennsylvania

Dear Mr. Durr:

This is in reference to the Sanitary Water Board letter of February 29, 1969 notifying the Whitmoyer Laboratories, Myerstown Plant, that its Industrial Wastes Permit #I.W. 668 I 004 has been modified to include the provisions set forth under Section 16, Article 600 of the Rules & Regulations of the Sanitary Water Board of the Commonwealth of Penna. The modification concerns the discharge of heated wastes.

We are pleased to state that the thermal quality and content of the effluent of the Myerstown Plant located on the Tulpehocken Creek, does not contribute to the thermal quality of these waters to the extent such as to exceed the limits as set forth in the new standards. The modification has been noted and made part of our I.W. Permit #668 I 004. It is our intention to continue to operate accordingly.

The following information is submitted to demonstrate that the operation of the Whitmoyer Laboratories at Myerstown, Pennsylvania is in compliance with the new standards:

1. Mr. F. A. Dengler, Supervisor in charge of our ground water recovery operations has been taking temperatures of waters as part of the routine stream sampling program we assumed at the Myerstown Plant. Attached is Mr. Dengler's report of compilation of temperature data which he collected over an eleven month period from 5/27/68 through 3/24/69. The data includes temperatures of the Tulpehocken Creek above and below the plant, as well as the plant's cooling water discharge. The report also contains a diagram showing the location of the sampling points.

AR100140

June 2, 1969

2. The data shows that the temperature of the Tulpehocken Creek varies with the ambient temperature (column 6). The temperature both above the plant (column 1) and below the plant (column 5) averages between 60°F and 65°F during the warmer weather and averages between 38°F and 42°F during the colder months. The average temperature of these points over the eleven month period was about 52°F. A comparison of temperature between these two points shows that the cooling water (column 4) discharged between the points does not, for all practical purposes, change the stream temperature. Temperature increases between the points averages less than 1°F, or well within the accuracy of measurement. Averages of the temperatures actually shows the downstream point to be .01 of a degree less than the upstream point. We believe this may be due to the withdrawal of waters for cooling use from the bottom of the fire dam (column 2), which is considerably deeper than the stream.

3. There is no flow gauging station on the Tulpehocken Creek within the vicinity of the plant, however, we have spot checked the flow on occasion in the past. We estimate the flow averages around 5,000 gallons per minute, with a low flow of approximately 3,000 gallons per minute.

The volume of cooling water discharged from the Myerstown Plant approximates 500 gallons per minute. The lowest usage of 400 gallons per minute occurs during the colder months and the highest usage of 600 gallons per minute occurs during the summer months.

The temperature of the discharge is higher than above the plant, as a result of the cooling operations during chemical manufacture. The increase in temperature of the cooling water averaged 4.9°F, with a maximum of 12°F being noted on two occasions. Generally, the highest differential in increase of temperature occurs during the winter months and the lowest during the summer months. Assuming perfect transfer of heat to the receiving stream and assuming that a maximum temperature differential of 12°F that was noted (Dec. 18 and 20, 1968) occurred during a maximum discharge rate of 600 gallons per minute and a minimum stream flow of 3,000 gallons per minute, the maximum increase in temperature that could occur on the Tulpehocken Creek from the discharge would be 2.4°F. This is well within an allowable temperature increase of 5°F.

Very truly yours,


T. Iezzi

TI/mk
Attachment

cc: W. P. Ambrogio
D. J. Butterbaugh
F. A. Dergler
L. Klein
F. Rarig

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